

# **ABSTRACT**

A PROCESS FOR ACHIEVING A 5 LOG REDUCTION (99%) OF BACTERIA ON SEEDS USING ULTRAVIOLET ACTIVATED OXYGEN GAS. THE SEEDS ARE IN A TANK AND THE GAS IS INTRODUCED USING A SPARGING SYSTEM THAT ALLOWS THE GAS TO BE DELIVERED IN 20 TO 60 MICRON BUBBLES FOR GREATER CONTACT AREA BETWEEN THE SEED AND GAS, ALLOWING THE ACTIVATED OXYGEN TO REDUCE BACTERIA FAST AND EFFICIENTLY. ALSO, THE WATER IS SATURATED WITH ULTRAVIOLET ACTIVATED OXYGEN FOR USE IN GERMINATION AND AIDING IN THE GROWING PROCESSES. THIS REDUCTION OF BACTERIA RESULTS IN EXTENDED SHELF LIFE ( AND NO CHLORINE IS USED).

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